Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2019-02-06-14** **Date: 20-08-2018**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Sign and Ornamental Boards in Ward No 03
Agency	:	Sri.Thyagaraju.R.S No:15, Ramachandra Pura Jallahalli Post, Bangalore-560013
Customer's Reference	:	EE(YNK.D)E-PMT-20/WO/19/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-08-2018
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	17-08-2018
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

SLNo.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.98	–
2	Finess by Air permeablity method (m^2/kg,Min)	297.3	225m^2/kg, Min
3	Density (gm/cc)	3.11	–
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	285 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2019-02-06-14** **Date: 14-09-2018**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Sign and Ornamental Boards in Ward No 03
Agency	:	Sri.Thyagaraju.R.S No:15, Ramachandra Pura Jallahalli Post, Bangalore-560013
Customer's Reference	:	EE(YNK.D)E-PMT-20/WO/19/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-08-2018
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	17-08-2018
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.0N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.5N/mm2	Not less than 37 N/mm^2
3	28 Days	55.5N/mm^2	Not less than 53 N/mm^2

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Authorized Signatory
Quality Manager

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TEST REPORT ON COARSE AGGREGATES

	:	CP-2019-02-06-14 **Date: 20-08-2018**
mer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
dress	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
oject Name	:	Providing Sign and Ornamental Boards in Ward No 03
Agency	:	Sri.Thyagaraju.R.S No:15, Ramachandra Pura Jallahalli Post, Bangalore-560013
Customer's Reference	:	EE(YNK.D)E-PMT-20/WO/19/2018-19
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	16-08-2018
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	16-08-2018

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	214	214	1.4	98.6	90-100
3	20 mm	5049	5263	35.1	64.9	30-70
4	10 mm	7132	12395	82.6	17.4	10-35
5	4.75 mm	2121	14516	96.8	3.2	0-5
6	Pan	484	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

) : CP-2019-02-06-14 Date: 20-08-2018

SICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.9	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.1	
3	Specific Gravity	2.59	–
4	Bulk Density(Loose) (Kg/l)	1.39	–
5	Bulk Density(Compacted) (Kg/l)	1.46	–
6	Water Absorption(%)	0.22	–

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Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2019-02-06-14** **Date: 18-08-2018**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Sign and Ornamental Boards in Ward No 03
Agency	:	Sri.Thyagaraju.R.S No:15, Ramachandra Pura Jallahalli Post, Bangalore-560013
Customer Reference	:	EE(YNK.D)E-PMT-20/WO/19/2018-19
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-08-2018
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	16-08-2018

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	195	195	3.9	96.1	90-100
3	10 mm	2714	2909	58.2	41.8	25-55
4	4.75 mm	1988	4897	97.9	2.1	0-10
5	Pan	103	5000	100	0	_

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TEST REPORT ON COARSE AGGREGATES

: CP-2019-02-06-14 Date: 18-08-2018

SICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.8	
3	Specific Gravity	2.57	–
4	Bulk Density(Loose) (Kg/l)	1.41	–
5	Bulk Density(Compacted) (Kg/l)	1.49	–
6	Water Absorption(%)	0.28	–
7	Aggregate crushing Value(%)	23.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	21.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Quality Manager

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2019-02-06-14 **Date: 18-08-2018**

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Providing Sign and Ornamental Boards in Ward No 03

Agency : Sri.Thyagaraju.R.S No:15, Ramachandra Pura Jallahalli Post, Bangalore-560013

Customer's Reference : EE(YNK.D)E-PMT-20/WO/19/2018-19

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 16-08-2018

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 16-08-2018

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	28	28	2.8	97.2	90-100	90-100	90-100	95-100
3	2.36 mm	158	186	18.6	81.4	60-95	75-100	85-100	95-100
4	1.18 mm	232	418	41.8	58.2	30-70	55-90	75-100	90-100
5	600 micron	149	567	56.7	43.3	15-34	35-59	60-79	80-100
6	300 micron	168	735	73.5	26.5	5-20	8-30	12-40	15-50
7	150 micron	172	907	90.7	9.3	0-10	0-10	0-10	0-15
8	Pan	93	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

: CP-2019-02-06-14 Date: 18-08-2018

PROPERTIES

Tests	Result	Requirements as per IS 383:2016
Water Absorption(%)	1.71	–
Specific Gravity	2.54	–
Material finer than 75 micron(%)	8.1	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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